

WATER-BASED DRILLING FLUIDS USING LATEX ADDITIVES

Abstract of the Disclosure

5 A water-based drilling fluid having a polymer latex capable of providing a
deformable latex film on at least a portion of a subterranean formation has been
discovered to provide reduced drilling fluid pressure invasion when used to drill in
shale formations for hydrocarbon recovery operations. A precipitating agent such
as a silicate or an aluminum complex (e.g. sodium aluminate) is preferably used in
conjunction with the polymer. Typically, the water present contains a salt to form a
10 brine, often to saturation, although the invention may be practiced with fresh water.
If a salt is employed, it is often helpful to additionally employ a surfactant, such as a
betaine, for example.